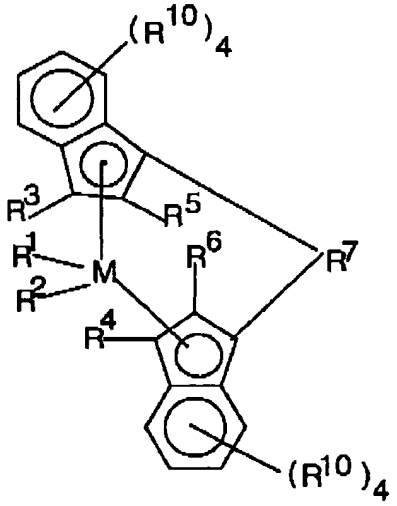
Amendments to the Claims:

This listing of claims will replace all prior versions and listing of claims in this application.

Listing of Claims:

1. (Previously Presented) A process of preparing a polymer composition that comprises branched crystalline polypropylene, having a melting point Tm of 145°C or more, said process comprising: contacting a metallocene catalyst compound represented by the formula:



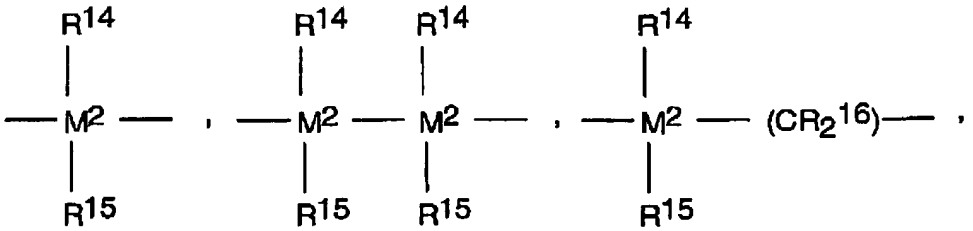
wherein: M is a metal of Group 4, 5, or 6 of the Periodic Table;

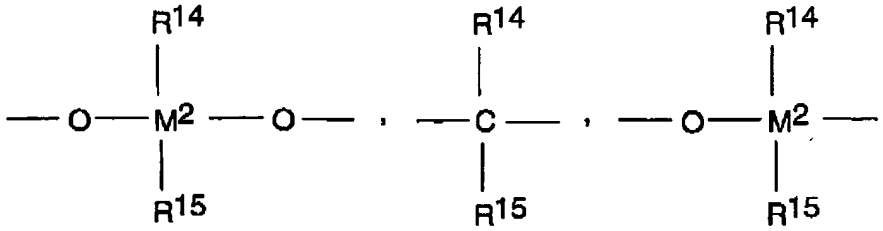
R^1 and R^2 are identical or different, and are one of a hydrogen atom, a C_1-C_{10} alkyl group, a C_1-C_{10} alkoxy group, a C_6-C_{10} aryl group, a C_6-C_{10} aryloxy group, a C_2-C_{10} alkenyl group, a C_7-C_{40} arylalkyl group, a C_7-C_{40} alkylaryl group, a C_8-C_{40} arylalkenyl group, or a halogen atom, or a conjugated diene which is optionally substituted with one or more hydrocarbyl, tri(hydrocarbyl)silyl groups or hydrocarbyl, tri(hydrocarbyl)silylhydrocarbyl groups, said diene having up to 30 atoms not counting hydrogen;

the radicals R^3, R^4, and R^{10} are identical or different and have the meanings stated for R^5 and R^6, or two adjacent R^{10} radicals are joined together to form a ring;

R^5 and R^6 are identical or different, and are one of a hydrogen atom, a halogen atom, a C_1-C_{10} alkyl group, which may be halogenated, a C_6-C_{10} aryl group, which may be halogenated, a C_2-C_{10} alkenyl group, a C_7-C_{40} arylalkyl group, a C_7-C_{40} alkylaryl group, a C_8-C_{40} arylalkenyl group, a $-NR_2'$, $-SR'$, $-OR'$, $-OSiR_3'$ or $-PR_2'$ radical, wherein: R' is one of a halogen atom, a C_1-C_{10} alkyl group, or a C_6-C_{10} aryl group;

R^7 is





$-B(R^{14})-$, $-Al(R^{14})-$, -Ge-, -Sn-, -O-, -S-, -SO-, $-SO_2-$, $-N(R^{14})-$, -CO-, $-P(R^{14})-$, or $-P(O)(R^{14})-$;

wherein: R^{14}, $R^{15}$and R^{16} are identical or different and are a hydrogen atom, a halogen atom, a C_1-C_{20} branched or linear alkyl group, a C_1-C_{20} fluoroalkyl or silaalkyl group, a C_6-C_{30} aryl group, a C_6-C_{30} fluoroaryl group, a C_1-C_{20} alkoxy group, a C_2-C_{20} alkenyl group, a C_7-C_{40} arylalkyl group, a C_8-C_{40} arylalkenyl group, a C_7-C_{40} alkylaryl group, or R^{14} and R^{15}, together with the atoms binding them, form a cyclic ring;

M^2 is one or more carbons, silicon, germanium or tin;

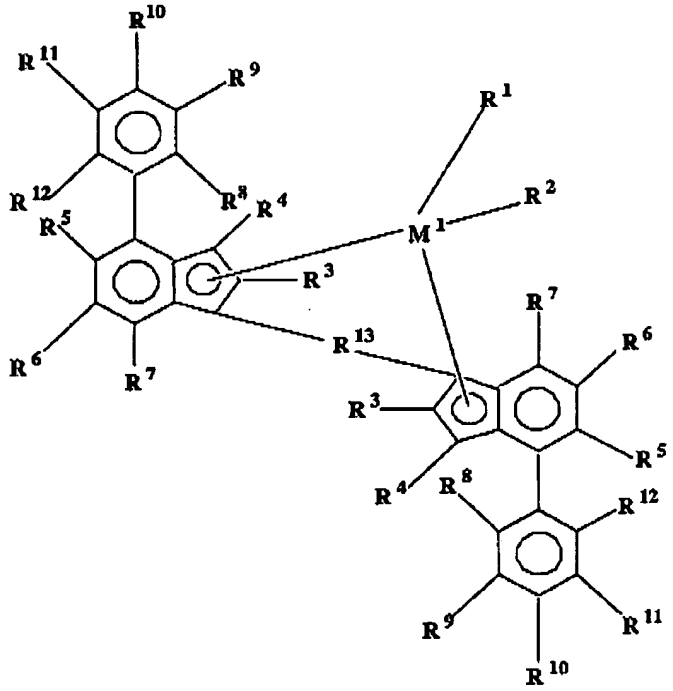
with a polymerization medium that comprises propylene monomers; and less than 25 volume percent diluent; and conducting polymerization of the propylene monomers at a temperature greater than 70°C for a time sufficient to provide branched crystalline polypropylene

that has from 0.0 wt% to 2.0 wt% ethylene, a branching index (g') of .97 or less and a heat of fusion of 70 J/g or more, wherein diene monomer has not been added to the polymerization medium and wherein the metallocene catalyst compound is combined with propylene in the absence of hydrogen.

2. (Previously Presented) The process of Claim 1, wherein the polymerization medium has less than 20 volume percent diluent.

3. (Canceled)

4. (Previously Presented) The process of claim 1, wherein the metallocene compound is represented by the formula:



(I)

wherein:

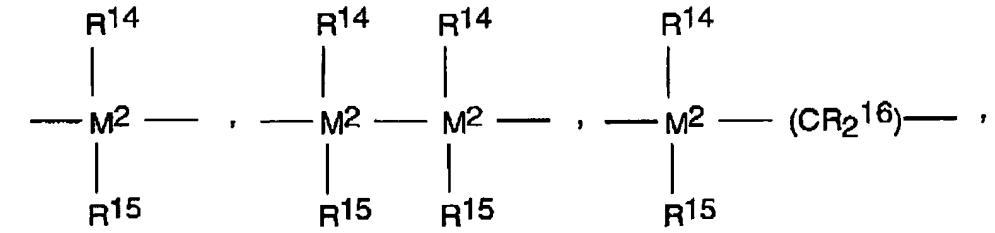
M^1 is selected from the group consisting of titanium, zirconium, hafnium, vanadium, niobium, tantalum, chromium, molybdenum and tungsten;

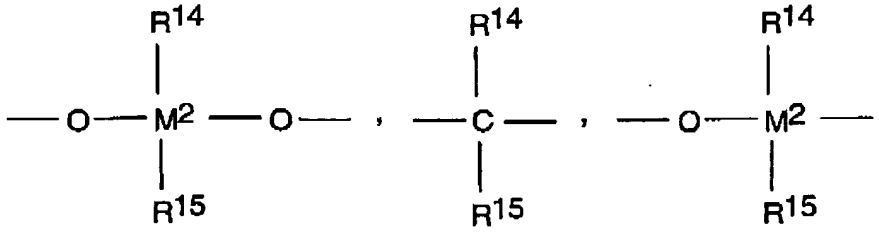
R^1 and R^2 are identical or different, and are one of a hydrogen atom, a C_1-C_{10} alkyl group, a C_1-C_{10} alkoxy group, a C_6-C_{10} aryl group, a C_6-C_{10} aryloxy group, a C_2-C_{10} alkenyl group, a C_2-C_{40} alkenyl group, a C_7-C_{40} arylalkyl group, a C_7-C_{40} alkylaryl group, a C_8-C_{40} arylalkenyl group, an OH group or a halogen atom; R^1 and R^2 may also be joined together to form an alkanediyl group or a conjugated C_{4-40} diene ligand which is coordinated to M^1 in a metallocyclopentene fashion; R^1 and R^2 may also be identical or different conjugated dienes, optionally substituted with one or more hydrocarbyl, tri(hydrocarbyl)silyl groups or hydrocarbyl, tri(hydrocarbyl)silylhydrocarbyl groups, said dienes having up to 30 atoms not counting hydrogen and forming a π complex with M;

each R^3 is identical or different from the other R^3 and is each a hydrogen atom, a halogen atom, a C_1-C_{10} alkyl group which may be halogenated, a C_6-C_{10} aryl group which may be halogenated, a C_2-C_{10} alkenyl group, a C_7-C_{40} -arylalkyl group, a C_7-C_{40} alkylaryl group, a C_8-C_{40} arylalkenyl group, a $-NR'_2$, $-SR'$, $-OR'$, $-OSiR'_3$ or $-PR'_2$ radical, wherein R' is one of a halogen atom, a C_1-C_{10} alkyl group, or a C_6-C_{10} aryl group;

R^4 to R^7 are identical or different and are hydrogen, or are as defined for R^3 or two or more adjacent radicals R^5 to R^7 together with the atoms connecting them form one or more rings;

R^{13} is

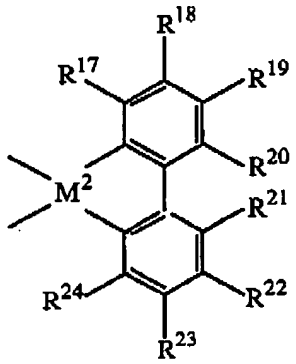




-B(R^{14})-, -Al(R^{14})-, -Ge-, -Sn-, -O-, -S-, -SO-, -SO_2-, -N(R^{14})-, -CO-, -P(R^{14})-, or -P(O)(R^{14})-;

wherein: R^{14}, $R^{15}$and R^{16} are identical or different and are a hydrogen atom, a halogen atom, a C_1-C_{20} branched or linear alkyl group, a C_1-C_{20} fluoroalkyl or silaalkyl group, a C_6-C_{30} aryl group, a C_6-C_{30} fluoroaryl group, a C_1-C_{20} alkoxy group, a C_2-C_{20} alkenyl group, a C_7-C_{40} arylalkyl group, a C_8-C_{40} arylalkenyl group, a C_7-C_{40} alkylaryl group, or R^{14} and R^{15}, together with the atoms binding them, form a cyclic ring;

or, R^{13} is represented by the formula:



wherein: R^{17} to R^{24} are as defined for R^1 and R^2, or two or more adjacent radicals R^{17} to R^{24}, including R^{20} and R^{21}, together with the atoms connecting them form one or more rings;

M^2 is one or more carbons, silicon, germanium or tin; and

R^8, R^9, R^{10}, R^{11} and R^{12} are identical or different and have the meanings stated for R^4 to R^7.

5. (Original) The process of claim 1 in which the polymerization medium has a first phase that comprises propylene monomers and a second phase that comprises the branched crystalline polypropylene.

6. (Previously Presented) The process of claim 1 in which the polymerization medium has a first phase that comprises propylene monomers and a second phase that comprises the branched crystalline polypropylene, wherein the first phase has less than 20 volume percent diluent.

7. (Original) The process of claim 1 in which the polymerization medium has a first phase that comprises propylene monomers and a second phase that comprises the branched crystalline polypropylene, wherein the second phase is a solid phase.

8. (Original) The process of claim 1 in which the polymerization medium has a first phase that comprises propylene monomers and macromers and a second phase that comprises the branched crystalline polypropylene.

9. (Original) The process of claim 1, in which the polymerization of the propylene monomers is conducted at a temperature of 75°C or higher.

10. (Original) The process of claim 1, in which the polymerization of the propylene monomers is conducted at a temperature of 80 °C or higher.

11. (Original) The process of claim 1, in which the polymerization of the propylene monomers is conducted at a temperature of 90 °C or higher.

12. (Original) The process of claim 1, in which the branched crystalline polypropylene has a crystallization temperature (Tc) of 100 °C or more.

13. (Original) The process of claim 1, in which the branched crystalline polypropylene has a crystallization temperature (Tc) or 105 °C or more.

14. (Original) The process of claim 1, in which the branched crystalline polypropylene has a crystallization temperature (Tc) of 110 °C or more.

15. (Original) The process of claim 1, in which the branched crystalline polypropylene has a crystallization temperature (Tc) of from 105 °C to 110 °C.

16. (Canceled)

17. (Original) The process of claim 1, in which the branched crystalline polypropylene has a melting point (Tm) of 150 °C or more.

18. (Original) The process of claim 1, in which the branched crystalline polypropylene has a melting point (Tm) of 155 °C or more.

19. (Original) The process of claim 1, in which the branched crystalline polypropylene has a melting point (Tm) of 160 °C or more.

20. (Original) The process of claim 1, in which the branched crystalline polypropylene has a melting point (Tm) of from 145 °C to 160 °C.

21. (Original) The process of claim 1, in which the branched crystalline polypropylene has a Melt Flow Rate of 0.5 or more.

22. (Original) The process of claim 1, in which the branched crystalline polypropylene has a Melt Flow Rate of 0.7 or more.

23. (Original) The process of claim 1, in which the branched crystalline polypropylene has a Melt Flow Rate of 1.0 or more.

24. (Original) The process of claim 1, in which the branched crystalline polypropylene has a Melt Flow Rate of 1.5 or more.

25. (Previously Presented) The process of claim 1, in which the metallocene comprises dimethylsilylbis(2-methyl-4-phenyl-1-indenyl)zirconium dimethyl.

26. (Previously Presented) The process of claim 1, in which the metallocene comprises dimethylsilylbis(2-methyl-4-phenyl-1-indenyl)zirconium dimethyl or dimethylsilylbis(2-methyl-4-phenyl-1-indenyl)zirconium dichloride.

27. (Previously Presented) The process of claim 1, in which the metallocene comprises dimethylsilylbis(2-methyl-4-naphthyl-1-indenyl)zirconium dimethyl or dimethylsilylbis (2-methyl-4-naphthyl-1-indenyl)zirconium dichloride.

28. (Previously Presented) The process of claim 1, in which the metallocene comprises a dimethylanilinium tetrakis (perfluorophyl) boron activator.

29. (Previously Presented) The process of claim 1, in which the metallocene comprises a methylaluminoxane activator.

30-31. (Canceled)

32. (Currently Amended) The process of claim 2, in which polymerization medium has ~~less than~~ less than 10 volume percent diluent.

33. (Original) The process of claim 1, in which the branched crystalline polypropylene has a propylene content of 97 wt% or more.

34. (Canceled)

35. (Original) The process of claim 1, in which the branched crystalline polypropylene is isotactic or syndiotactic.

36. (Canceled)

37. (Original) The process of claim 1, in which the heat of fusion of the branched crystalline polypropylene is 80 J/g or more.

38. (Original) The process of claim 1, in which the Heat of fusion of the branched crystalline polypropylene is 90 J/g or more.

39. (Original) The process of claim 1, in which the heat of fusion of the branched crystalline polypropylene is 100 J/g or more.

40. (Canceled)

41. (Original) The process of claim 1, in which the branched crystalline polypropylene has a Branching Index of 0.95 or less.

42. (Original) The process of claim 1, in which the branched crystalline polypropylene has a Branching Index of 0.90 or less.

43. (Original) The process of claim 1, in which the branched crystalline polypropylene has a Branching Index of 0.80 or less.

44. (Canceled)

45. (Original) The process of claim 1, in which the polymerization medium comprises more than 70% propylene monomers by volume prior to the beginning of polymerization.

46. (Original) The process of claim 1, in which the polymerization medium consists essentially of propylene monomers.

47. (Original) The process of claim 1, in which the polymerization medium consists essentially of monomers and a substantially inert solvent or diluent.

48. (Original) The process of claim 1, in which the branched polypropylene is a homopolymer.

49. (New): A process of preparing a branched crystalline homopolypropylene composition, comprising:

contacting a polymerization mixture that comprises propylene monomers with a bridged metallocene compound that has at least two indenyl rings or derivatives of indenyl rings, each ring being substituted at the 2 and 4 positions, activated with a non-coordinating anion; and conducting polymerization of the propylene monomers for a time sufficient to form branched crystalline polypropylene composition having a heat of fusion of 70 J/g or more, a Tm of 145 °C or more, and a g' or 0.97 or less.